External Validation of the Runco Ideational Behavior Scale

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Abstract

This study examined the relationship between scores on the Runco Ideational Behavior Scale (RIBS) and two other measures of creativity, the Torrance Test of Creative Thinking (TTCT), and the How Do You Think (HDYT) test, and expected to find convergent validity between RIBS and TTCT scores and discriminant validity between RIBS and HDTY scores. Results, however, showed no relationship between RIBS and TTCT scores, and strong correlations between RIBS and HDTY scores. Implications of these results are discussed.

Rationale and Goals

The RIBS, (Runco, M.A., Puckter, J.A., & Lim, W., 2000-2001) was recently created as a tool for assessing ideation, the ability to generate original ideas. It is intended to be a useful criterion for measures of divergent thinking, a component of creativity that involves the development of numerous distinct and original ideas. Research has shown that the RIBS has internal consistency, but there is no research examining how the RIBS relates to other measures of creativity.

The purpose of this study was to examine the external validity of the RIBS by comparing its scores to scores from two commonly used creativity tests, the HDYT (Davis, 1973) and the TTCT (Torrance, E.P., 1966). The TTCT is a self-report biographical/interest inventory, a measure that assesses past behaviors and present interests and attitudes to identify. In this case, tendencies and preferences in the respondent typically related to creativity. In contrast, the TTCT is a performance measure of divergent thinking which requires test-takers to produce ideas.

Because both the Torrance and the RIBS claim to measure ideation, we expect that their scores will be highly correlated; they should display convergent validity. In contrast, because the HDYT is a biographical/interest inventory, creativity that is not related to ideation, the RIBS should be less correlated with the HDYT than the RIBS, displaying discriminant validity.

Hypothesis 1: The RIBS and the TTCT will show convergent validity.

Hypothesis 2: The RIBS and the HDYT will show discriminant validity.

Methods

Participants:
- 112 students were recruited from a private midwestern university. Of these, 55 were students in an introductory psychology course. The 13 remaining subjects were upper-level Fine Arts students. No subject was included in both samples, that is, no introductory psychology students were also Fine Arts majors and vice versa.
- Participants' year in school: 38 first year students, 13 second year students, 14 third year students, 5 fourth year students, and 2 students with other status.
- Participants' gender: 63.5% female (n = 46) and 36.5% male (n = 26).

Procedure and Measures:
- The TTCT, the HDYT, and the RIBS were given to all Fine Arts students or those enrolled in introductory psychology courses. The order of presentation of the inventories was varied across subjects. Both the RIBS and TTCT were given to all students.
- The RIBS is a measure of creative products that requires test-takers to produce drawings that are scored on dimensions related to creativity, such as originality, non-triviality, and the like. The test results in 15 sub-scores that combine into a score called TTCT Average, and two additional scores that are added to the TTCT Average to produce the overall score, called TTCT Index.
- The HDYT is a biographical/interest inventory. Unlike the TTCT, the HDYT does not require producing ideas, the test-taker responds to 100 items related to creativity using a five-point scale. The inventory results in one overall score.
- The RIBS is intended to be a self-report counterpart to the TTCT. It is a biographical/inventory containing thirty-three questions divided into two factors. It results in an overall score and two sub-scores.

Sample Questions

- RIBS 1: I try to exercise my mind by thinking things through.
- RIBS 2: I come up with lots of ideas or solutions to problems.
- RIBS 2: Some people might think me scatterbrained or absent-minded because I think a variety of things at once.
- HDTY: I enjoy the confusion of a big city.
- HDTY: I think I'm not very conventional in many ways.
- HDTY: It is important to be able to laugh at ourselves as well as worry about making mistakes.
- HDTY: I could be considered a "spongetoos" person.

Results Summary

- Tables 1 and 2 provide descriptive statistics for the RIBS, TTCT, and HDYT. Table 1 shows the mean and standard deviation of the RIBS, TTCT, and HDYT. Table 2 shows the correlation between the RIBS and TTCT, as well as the RIBS and HDYT.

Table 1: Mean and Standard Deviation of RIBS, TTCT, and HDYT scores.

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mean</th>
<th>SD</th>
<th>T-Test</th>
<th>p-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>RIBS</td>
<td>112</td>
<td>25.65</td>
<td>-</td>
<td>0.46</td>
</tr>
<tr>
<td>TTCT</td>
<td>77.13</td>
<td>10.16</td>
<td>-</td>
<td>0.38</td>
</tr>
<tr>
<td>HDYT</td>
<td>9.33</td>
<td>2.17</td>
<td>-</td>
<td>0.17</td>
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</tbody>
</table>

Table 2: Correlation of RIBS with TTCT and HDYT scores.

<table>
<thead>
<tr>
<th>Scale 1</th>
<th>Scale 2</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>RIBS</td>
<td>TTCT</td>
<td>0.39</td>
</tr>
<tr>
<td>RIBS</td>
<td>HDYT</td>
<td>0.74</td>
</tr>
<tr>
<td>TTCT</td>
<td>HDYT</td>
<td>0.40</td>
</tr>
</tbody>
</table>

Conclusions

This study shows that two tests, RIBS and TTCT, which both have internal validity and claim to measure creativity do not have convergent validity. These results cannot be attributed to range restriction in scores. This suggests that these two tests do not in fact measure the same construct.

The finding of a strong positive correlation between RIBS scores and HDYT scores, suggests the RIBS measures constructs similar to those of the HDYT. This brings into question the usefulness of the RIBS as a criterion for measures of divergent thinking such as the TTCT. However, this finding may be unique to the Figure TTCT. This is the first study and more research would be needed to draw valid conclusions.

References

